Munkhbayar Batmunkh

List of Publications by Year
in descending order

96 papers	4,673 citations	81743 39 h-index	102304 66 g-index
98 all docs	98 docs citations	98 times ranked	6221 citing authors

#	Article	IF	Citations
1	Phosphorene and Phosphoreneâ€Based Materials â€“ Prospects for Future Applications. Advanced Materials, 2016, 28, 8586-8617.	11.1	378
2	Surfaceâ€Halogenationâ€Induced Atomicâ€Site Activation and Local Charge Separation for Superb CO₂ Photoreduction. Advanced Materials, 2019, 31, e1900546.	11.1	343
3	Surfactant-free dispersion of silver nanoparticles into MWCNT-aqueous nanofluids prepared by one-step technique and their thermal characteristics. Ceramics International, 2013, 39, 6415-6425.	2.3	185
4	Influence of dry and wet ball milling on dispersion characteristics of the multi-walled carbon nanotubes in aqueous solution with and without surfactant. Powder Technology, 2013, 234, 132-140.	2.1	142
5	Thermal Conductivity of TiO₂ Nanoparticles Based Aqueous Nanofluids with an Addition of a Modified Silver Particle. Industrial & Engineering Chemistry Research, 2014, 53, 8445-8451.	1.8	141
6	Investigation of Al₂O₃-MWCNTs Hybrid Dispersion in Water and Their Thermal Characterization. Journal of Nanoscience and Nanotechnology, 2012, 12, 4553-4559.	0.9	138
7	Carbon Nanotubes for Dye-Sensitized Solar Cells. Small, 2015, 11, 2963-2989.	5.2	122
8	Black Phosphorus: Synthesis and Application for Solar Cells. Advanced Energy Materials, 2018, 8, 1701832.	10.2	118
9	Zincâ€“nickelâ€“cobalt ternary hydroxide nanoarrays for high-performance supercapacitors. Journal of Materials Chemistry A, 2019, 7, 11826-11835.	5.2	112
10	Nanocarbons for mesoscopic perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 9020-9031.	5.2	104
11	Nitrogenâ€Doped CN_x/CNTs Heteroelectrocatalysts for Highly Efficient Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2017, 7, 1602276.	10.2	102
12	Highly productive synthesis process of well dispersed Cu2O and Cu/Cu2O nanoparticles and its thermal characterization. Materials Chemistry and Physics, 2013, 141, 636-642.	2.0	101
13	Nitrogen-doped phosphorene for electrocatalytic ammonia synthesis. Journal of Materials Chemistry A, 2020, 8, 15875-15883.	5.2	88
14	Nearâ€Infrared Active Lead Chalcogenide Quantum Dots: Preparation, Postâ€Synthesis Ligand Exchange, and Applications in Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 5202-5224.	7.2	86
15	Carbon Nanotubes in TiO₂ Nanofiber Photoelectrodes for Highâ€Performance Perovskite Solar Cells. Advanced Science, 2017, 4, 1600504.	5.6	83
16	Highly Dispersed Ru Nanoparticles on Boronâ€Doped Ti₃C₂T_x (MXene) Nanosheets for Synergistic Enhancement of Electrocatalytic Hydrogen Evolution. Small, 2021, 17, e2102218.	5.2	83
17	Recent Advances in Perovskiteâ€Based Buildingâ€Integrated Photovoltaics. Advanced Materials, 2020, 32, e2000631.	11.1	80
18	Emerging 2D Layered Materials for Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902253.	10.2	79

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19	Solution processed graphene structures for perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 2605-2616.	5.2	73
20	Dyeâ€Sensitized Solar Cell Counter Electrodes Based on Carbon Nanotubes. ChemPhysChem, 2015, 16, 53-65.	1.0	72
21	Ti₃C₂T_x (MXene)â€Silicon Heterojunction for Efficient Photovoltaic Cells. Advanced Energy Materials, 2019, 9, 1901063.	10.2	68
22	Recent Advances in Applications of Sorted Singleâ€Walled Carbon Nanotubes. Advanced Functional Materials, 2019, 29, 1902273.	7.8	67
23	Ambient Fabrication of Organicâ€“Inorganic Hybrid Perovskite Solar Cells. Small Methods, 2021, 5, e2000744.	4.6	63
24	Synthesis, purification, properties and characterization of sorted single-walled carbon nanotubes. Nanoscale, 2018, 10, 22087-22139.	2.8	62
25	Doping Strategies in Sb₂S₃ Thin Films for Solar Cells. Small, 2021, 17, e2100241.	5.2	62
26	Efficient and Fast Synthesis of Fewâ€Layer Black Phosphorus via Microwaveâ€Assisted Liquidâ€Phase Exfoliation. Small Methods, 2017, 1, 1700260.	4.6	59
27	Efficient Production of Phosphorene Nanosheets via Shear Stress Mediated Exfoliation for Lowâ€Temperature Perovskite Solar Cells. Small Methods, 2019, 3, 1800521.	4.6	58
28	Unsaturated p-Metal-Based Metalâ€“Organic Frameworks for Selective Nitrogen Reduction under Ambient Conditions. ACS Applied Materials & Interfaces, 2020, 12, 44830-44839.	4.0	58
29	Surface oxidized two-dimensional antimonene nanosheets for electrochemical ammonia synthesis under ambient conditions. Journal of Materials Chemistry A, 2020, 8, 4735-4739.	5.2	57
30	Microwave-assisted synthesis of black phosphorus quantum dots: efficient electrocatalyst for oxygen evolution reaction. Journal of Materials Chemistry A, 2019, 7, 12974-12978.	5.2	56
31	Ruthenium(<scp>iii</scp>) polyethyleneimine complexes for bifunctional ammonia production and biomass upgrading. Journal of Materials Chemistry A, 2019, 7, 25433-25440.	5.2	55
32	Multifunctional nanostructured materials for next generation photovoltaics. Nano Energy, 2020, 70, 104480.	8.2	52
33	Breaking Platinum Nanoparticles to Singleâ€Atomic Ptâ€C₄ Coâ€catalysts for Enhanced Solarâ€toâ€Hydrogen Conversion. Angewandte Chemie - International Edition, 2021, 60, 2541-2547.	7.2	51
34	Synthesis of a grapheneâ€“tungsten composite with improved dispersibility of graphene in an ethanol solution and its use asÂa counter electrode for dye-sensitised solar cells. Journal of Power Sources, 2013, 230, 207-217.	4.0	50
35	Single-Walled Carbon Nanotubes Enhance the Efficiency and Stability of Mesoscopic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 19945-19954.	4.0	49
36	Electrocatalytic Activity of a 2D Phosphoreneâ€Based Heteroelectrocatalyst for Photoelectrochemical Cells. Angewandte Chemie - International Edition, 2018, 57, 2644-2647.	7.2	48

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37	Origin of Performance Enhancement in TiO₂â€Carbon Nanotube Composite Perovskite Solar Cells. Small Methods, 2019, 3, 1900164.	4.6	45
38	Photovoltaic performance of dye-sensitized solar cells with various MWCNT counter electrode structures produced by different coating methods. Electrochimica Acta, 2012, 80, 100-107.	2.6	43
39	Efficiency Enhancement of Singleâ€Walled Carbon Nanotubeâ€Silicon Heterojunction Solar Cells Using Microwaveâ€Exfoliated Fewâ€Layer Black Phosphorus. Advanced Functional Materials, 2017, 27, 1704488.	7.8	42
40	Effect of functionalized MWCNTs/water nanofluids on thermal resistance and pressure fluctuation characteristics in oscillating heat pipe. International Communications in Heat and Mass Transfer, 2013, 48, 93-98.	2.9	41
41	Carbonaceous Dyeâ€Sensitized Solar Cell Photoelectrodes. Advanced Science, 2015, 2, 1400025.	5.6	39
42	Plasmonic Gold Nanostars Incorporated into Highâ€Efficiency Perovskite Solar Cells. ChemSusChem, 2017, 10, 3750-3753.	3.6	39
43	Rechargeable sunlight-promoted Zn-air battery constructed by bifunctional oxygen photoelectrodes: Energy-band switching between ZnO/Cu2O and ZnO/CuO in charge-discharge cycles. Chemical Engineering Journal, 2022, 433, 133559.	6.6	39
44	Incorporation of graphene into SnO2 photoanodes for dye-sensitized solar cells. Applied Surface Science, 2016, 387, 690-697.	3.1	38
45	Electrically Sorted Single-Walled Carbon Nanotubes-Based Electron Transporting Layers for Perovskite Solar Cells. IScience, 2019, 14, 100-112.	1.9	36
46	Evolution of interfacial coupling interaction of Ni-Ru species for pH-universal water splitting. Chemical Engineering Journal, 2021, 426, 130762.	6.6	36
47	An experimental study of the planetary ball milling effect on dispersibility and thermal conductivity of MWCNTs-based aqueous nanofluids. Materials Research Bulletin, 2012, 47, 4187-4196.	2.7	35
48	Structural engineering to maintain the superior capacitance of molybdenum oxides at ultrahigh mass loadings. Journal of Materials Chemistry A, 2019, 7, 23941-23948.	5.2	34
49	Enhanced electrochemical production and facile modification of graphite oxide for cost-effective sodium ion battery anodes. Carbon, 2021, 177, 71-78.	5.4	34
50	1Dâ€2D Synergistic MXeneâ€Nanotubes Hybrids for Efficient Perovskite Solar Cells. Small, 2021, 17, e2101925.	5.2	34
51	Efficiency and stability enhancement of perovskite solar cells using reduced graphene oxide derived from earth-abundant natural graphite. RSC Advances, 2020, 10, 9133-9139.	1.7	33
52	Few-layer black phosphorus and boron-doped graphene based heteroelectrocatalyst for enhanced hydrogen evolution. Journal of Materials Chemistry A, 2020, 8, 20446-20452.	5.2	32
53	Low-overpotential electrochemical ammonia synthesis using BiOCl-modified 2D titanium carbide MXene. Chinese Chemical Letters, 2022, 33, 394-398.	4.8	30
54	Cesium-doped Ti3C2Tx MXene for efficient and thermally stable perovskite solar cells. Cell Reports Physical Science, 2021, 2, 100598.	2.8	29

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55	p-Type BP nanosheet photocatalyst with AQE of 3.9% in the absence of a noble metal cocatalyst: investigation and elucidation of photophysical properties. Journal of Materials Chemistry A, 2018, 6, 18403-18408.	5.2	28
56	Analysis of pressure fluctuations to evaluate thermal performance of oscillating heat pipe. Energy, 2014, 70, 135-142.	4.5	27
57	Application of a hole transporting organic interlayer in graphene oxide/single walled carbon nanotubeâ€“silicon heterojunction solar cells. Journal of Materials Chemistry A, 2017, 5, 8624-8634.	5.2	27
58	Effect of grinding speed changes on dispersibility of the treated multi-walled carbon nanotubes in aqueous solution and its thermal characteristics. Chemical Engineering and Processing: Process Intensification, 2012, 61, 36-41.	1.8	26
59	Surface Engineering to Reduce the Interfacial Resistance for Enhanced Photocatalytic Water Oxidation. ACS Catalysis, 2020, 10, 8742-8750.	5.5	26
60	Sulfurâ€Doped Graphene with Iron Pyrite (FeS₂) as an Efficient and Stable Electrocatalyst for the Iodine Reduction Reaction in Dyeâ€Sensitized Solar Cells. Solar Rrl, 2017, 1, 1700011.	3.1	25
61	Scalable Spray Drying Production of Amorphous V₂O₅â€“EGO 2D Heterostructured Xerogels for Highâ€Rate and Highâ€Capacity Aqueous Zinc Ion Batteries. Small, 2022, 18, e2105761.	5.2	24
62	TiO2 nanofiber photoelectrochemical cells loaded with sub-12Ânm AuNPs: Size dependent performance evaluation. Materials Today Energy, 2018, 9, 254-263.	2.5	23
63	A numerical investigation on LNG flow and heat transfer characteristic in heat exchanger. International Journal of Heat and Mass Transfer, 2014, 68, 110-118.	2.5	21
64	Sedimentation Study and Dispersion Behavior of Al₂O₃â€“H₂O Nanofluids with Dependence of Time. Advanced Science Letters, 2012, 6, 96-100.	0.2	20
65	Elemental 2D Materials: Solutionâ€Processed Synthesis and Applications in Electrochemical Ammonia Production. Advanced Functional Materials, 2022, 32, 2107280.	7.8	20
66	Insights into chemical doping to engineer the carbon nanotube/silicon photovoltaic heterojunction interface. Journal of Materials Chemistry A, 2017, 5, 24247-24256.	5.2	16
67	Experimental investigation of the mechanical grinding effect on graphene structure. RSC Advances, 2014, 4, 2495-2500.	1.7	15
68	Pyramidâ€Textured Antireflective Silicon Surface In Graphene Oxide/Singleâ€Wall Carbon Nanotubeâ€“Silicon Heterojunction Solar Cells. Energy and Environmental Materials, 2018, 1, 232-240.	7.3	13
69	The Ball Milling with Various Rotation Speeds Assisted to Dispersion of the Multi-Walled Carbon Nanotubes. Nanoscience and Nanotechnology Letters, 2012, 4, 20-29.	0.4	13
70	Effect of the collision medium size on thermal performance of silver nanoparticles based aqueous nanofluids. Composites Part B: Engineering, 2013, 54, 383-390.	5.9	11
71	Tin Oxide Lightâ€Scattering Layer for Titania Photoanodes in Dyeâ€Sensitized Solar Cells. Energy Technology, 2016, 4, 959-966.	1.8	11
72	Synthesis of ultra-long hierarchical ZnO whiskers in a hydrothermal system for dye-sensitised solar cells. RSC Advances, 2016, 6, 109406-109413.	1.7	10

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73	A luminescent terbium coordination complex as multifunctional sensing platform. Talanta, 2020, 208, 120363.	2.9	9
74	Integrated Fullâ€Spectrum Solar Energy Catalysis for Zeroâ€Emission Ethylene Production from Bioethanol. Advanced Functional Materials, 2022, 32, 2110026.	7.8	9
75	Effects of macro and micro roughness in forced convective heat transfer. International Communications in Heat and Mass Transfer, 2014, 50, 77-84.	2.9	8
76	Electrocatalytic Activity of a 2D Phosphoreneâ€Based Heteroelectrocatalyst for Photoelectrochemical Cells. Angewandte Chemie, 2018, 130, 2674-2677.	1.6	8
77	Breaking Platinum Nanoparticles to Singleâ€Atomic Ptâ€C 4 Coâ€catalysts for Enhanced Solarâ€toâ€Hydrogen Conversion. Angewandte Chemie, 2021, 133, 2571-2577.	1.6	8
78	Application of Hole-Transporting Materials as the Interlayer in Graphene Oxide/Single-Wall Carbon Nanotube Silicon Heterojunction Solar Cells. Australian Journal of Chemistry, 2017, 70, 1202.	0.5	7
79	Ambient air synthesis of multi-layer CVD graphene films for low-cost, efficient counter electrode material in dye-sensitized solar cells. FlatChem, 2018, 8, 1-8.	2.8	7
80	Sulfur-Functionalized Titanium Carbide Ti₃C₂T_x (MXene) Nanosheets Modified Light Absorbers for Ambient Fabrication of Sb₂S₃ Solar Cells. ACS Applied Nano Materials, 2022, 5, 12107-12116.	2.4	7
81	Facile Synthesis of Boron-Doped Reduced Electrochemical Graphene Oxide for Sodium Ion Battery Anode. Jom, 2021, 73, 2531.	0.9	6
82	Grinding characteristic of multi-walled carbon nanotubes-alumina composite particle. Journal Wuhan University of Technology, Materials Science Edition, 2012, 27, 1009-1013.	0.4	5
83	Vortex Fluidics Improved Morphology of CH₃NH₃PbI_{3â€x}Cl_x Films for Perovskite Solar Cells. ChemistrySelect, 2017, 2, 369-374.	0.7	5
84	Smart Solarâ€“Metalâ€“Air Batteries Based on BiOCl Photocorrosion for Monolithic Solar Energy Conversion and Storage. Small, 2022, 18, e2105668.	5.2	5
85	Use of Carbon Nanotubes in Third-Generation Solar Cells. , 2017, , 201-249.		4
86	Pt Nanocluster Co-Catalysts for Photocatalytic Water Splitting. Journal of Carbon Research, 2018, 4, 64.	1.4	4
87	Nahinfrarotaktive Bleichalkogenidâ€Quantenpunkte: Herstellung, postsynthetischer Ligandenaustausch und Anwendungen in Solarzellen. Angewandte Chemie, 2019, 131, 5256-5279.	1.6	4
88	Fast and cost-effective room temperature synthesis of high quality graphene oxide with excellent structural intactness. Sustainable Materials and Technologies, 2020, 25, e00198.	1.7	4
89	Effect of N719â€“Dye Adsorption Into Composition of Different Sized TiO₂ Films for Photovoltaic Performance of the Dye-Sensitized Solar Cells. Nanoscience and Nanotechnology Letters, 2013, 5, 741-749.	0.4	4
90	Laminated antimonene as an alternative and efficient shielding strategy against X-ray radiation. Applied Materials Today, 2022, 29, 101566.	2.3	4

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91	Advances in Emerging Solar Cells. Nanomaterials, 2020, 10, 534.	1.9	3
92	Exfoliated 2D Antimoneneâ€Based Structures for Lightâ€Harvesting Photoactive Layer of Highly Stable Solar Cells. Small Structures, 0, , 2200038.	6.9	2
93	Solar Power: Carbonaceous Dye-Sensitized Solar Cell Photoelectrodes (Adv. Sci. 3/2015). Advanced Science, 2015, 2, .	5.6	0
94	Back Cover: Solar RRL 3â€4â•2017. Solar Rrl, 2017, 1, 1770113.	3.1	0
95	Cesium-Doped Ti ₃C ₂T _x MXene for Efficient and Thermally Stable Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
96	Grinding Characteristics of Metal Powders and Carbon Nanotubes(CNTs) during Various Ball Milling Processes. , 2012, , .		0